

# Relationship Between the Scale, Structure, Efficiency and Economic Growth of Tobacco Financial Development in China

Yi Zhang, PhD

Shuwang Yang, Professor

Hang Zhang, Eng.

*Yi Zhang, Doctoral Candidate, China University of Geosciences, School of Economics and Management, Wuhan Hubei, China. Research area: economic growth. Shuwang Yang, Professor, China University of Geosciences, Principal's Office, Wuhan Hubei, China. Research area: economic growth. Hang Zhang, Principal Staff Member, Administration for Market Regulation of Henan Province, Zhengzhou Henan, China. Research area: economic growth. Correspondence author: Yi Zhang; [zhangyi200809@163.com](mailto:zhangyi200809@163.com)*

**Objectives:** This paper analyzes and studies the relationship between the scale, structure, efficiency and economic growth of tobacco financial development in China.

**Methods:** Through the research on the theory of supply chain finance, this paper studies the products and application of the financial chain in the tobacco industry by using the methods of case analysis, literature research and case analysis. At the same time, taking the products of a bank as an example, this paper describes the product handling and operation process in detail, and analyzes the advantages and disadvantages of the products. **Results:** Commercial banks at home and abroad have gradually realized the power of the vigorous development of tobacco financial supply chain and actively developed tobacco supply chain financial products. The promotion of China's bank supply chain financial products at this stage will help banks to improve and adjust the traditional credit business structure. At the same time, it helps to improve and optimize the structure of tobacco customers and enhance the business cooperation between tobacco companies and banks. This can reduce the business risk of the tobacco industry and improve the overall profitability of the tobacco industry. **Conclusion:** The tobacco industry should steadily take advantage of the organization and coordination advantages of the government and make use of development financial funds to overcome difficulties. Only by improving the design and enlarging the leverage of financial support policies can the tobacco industry further develop..

**Key words:** tobacco industry, supply chain finance, financial support, policy leverage.

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The tobacco industry is a pillar industry of China's economy. The tobacco industry has developed for many years in China. At present, the whole industry has formed a complete industrial chain in China<sup>1</sup>. At the same time, it has the characteristics of large capital demand, fast capital turnover, large and scattered individual participants and so on. The tobacco

industry has a strong financing demand, which is the most suitable new goal for the development of supply chain finance. Compared with the traditional financing methods, the development of supply chain finance widens the financing channels of tobacco related supporting participants, and makes use of the advantages brought by the characteristics of the tobacco

industry. This can not only effectively solve the financing difficulties of small and medium-sized enterprises, cigarette sellers and tobacco growers in the supply chain, but also reduce the credit risk of banks<sup>2</sup>. Taking most small and medium-sized enterprises, retailers and tobacco farmers in the supply chain as the starting point, the use of supply chain financial products can achieve the purpose of promoting the financing development of the participants in the whole tobacco supply chain.

As participants in the tobacco industry, tobacco growers and cigarette retailers carry out business activities around tobacco companies and are indispensable and important participants in the supply chain. But for a long time, the difficulty of financing has plagued tobacco growers and cigarette retailers. The main reasons are as follows: on the one hand, for tobacco growers and cigarette retailers, the access threshold of traditional bank financing products is too high, and each bank requires that credit must have mortgage guarantee or strong guarantee.

The number of tobacco growers and cigarette retailers is relatively large, the geographical location is relatively scattered, it is not easy to grasp the specific information of customers and the capital flow of previous years, the workload is large in the preliminary investigation, and it is not easy to obtain real and effective data. On the other hand, complex investigation, mortgage registration procedures and high financing costs make tobacco growers and cigarette retailers unable to get financial support from financial institutions in time.

Supply chain finance is an important part of the supply chain industry<sup>3</sup>. Different from the traditional mode of single enterprise as the financing subject, financial institutions need to understand the operation of the whole supply chain, take the core enterprise as the hub linking

the whole supply chain, provide financing services to the economic entities upstream and downstream of the whole supply chain, and promote the more active development of the whole supply chain, And transfer the financial risk of independent economic entities to the overall supply chain.

Core enterprises need to have good enterprise operation ability and sufficient cash flow, and play a leading role in the whole industry. Supply chain finance relies on the accounts receivable and prepayments formed by the real transactions between the upstream and downstream of the supply chain and the core enterprises to provide financing services for the upstream and downstream participants of the supply chain, which can effectively solve the problem of difficult and slow financing. However, there are some problems in supply chain finance, such as immature management and imperfect risk control system, which leads to the high entry threshold or inability of some supply chain participants in the promotion of supply chain financial products.

## METHODS

### Current Financial Situation of China's Tobacco Industry

Since the establishment of China National Tobacco Corporation, after years of development, China National Tobacco has become an industry with 500000 employees and an annual profit and tax of 170 billion yuan, which plays an important role in the national economy<sup>4</sup>. In 2021, under the guidance of national regulation and control policies, the production and sales of China's tobacco industry maintained a balanced growth. The product inventory of the tobacco industry is reasonable, the market price is basically stable, and the industrial efficiency is growing steadily<sup>5-6</sup>. As of July, the industry had produced 119.055 billion cigarettes (23.811 million boxes) for domestic sales<sup>7</sup>, an increase of 39.79

billion cigarettes (796000 boxes) over 2019, an increase of 3.5%<sup>8</sup>.

The change of cigarette product structure moved up year-on-year, the output proportion of category I and II cigarettes increased gently, and category IV cigarettes moved up significantly to category III cigarettes.<sup>9</sup> From January to July, the industry completed a total sales volume of 119498 billion cigarettes (23.9 million boxes), an increase of 45.55 billion cigarettes (911000 boxes) over 2020, an increase of 4.0%<sup>10</sup>. From January to July in 2021, the industry realized a total industrial and commercial tax profit of 176.05 billion yuan, an increase of 29.08 billion yuan or 19.8% over 2020<sup>11</sup>. Among them, the industrial tax profit was 171.423 billion yuan, a year-on-year increase of 15.4%<sup>12</sup>. The tobacco industry realized a commercial tax profit of 51.123 billion yuan, a year-on-year increase of 32.0%<sup>13</sup>. From January to July, the industrial and commercial profits of the whole industry totaled 67.16 billion yuan, an increase of 13.67 billion yuan over 2020, a year-on-year increase of 25.6%<sup>14</sup>. Among them, the industrial profit was 28.212 billion yuan, a year-on-year increase of 14.4%<sup>15</sup>. The commercial profit was 38.945 billion yuan, a year-on-year increase of 35.1%. On the whole, China's tobacco consumption market will maintain a slight upward trend, and the tobacco output will increase greatly compared with the period of the 13th five year plan. With the accelerated pace of world economic integration, the pattern and trend of the world tobacco industry will have a profound impact. For a long time, China's tobacco industry has been separated from the real market economy and conservative and closed. The implementation of international business strategy by multinational corporations in China will bring great impact and challenges to China's tobacco industry. From the perspective of market structure, with the continuous adjustment of China's policy

to the tobacco market, the future market structure change of China's tobacco will move from the current state of monopoly competition to oligopoly. Market competition will change from disorderly competition to effective and orderly peaceful competition.

### **Tobacco Financial Financing Model**

At present, the commonly used modes of tobacco finance are: accounts receivable financing mode, inventory financing mode and prepayment financing mode. In actual operation, inventory is difficult to manage, advance payment is limited by mortgage registration and it is difficult to implement after risk occurs, so it is less used in actual business operation. At present, accounts receivable financing is widely used.

#### **(1) Accounts receivable financing**

Accounts receivable financing refers to that when upstream enterprises sell to core enterprises, because the products provided by upstream enterprises are generally raw materials or primary finished products, and there is great competition among upstream enterprises. As the leader of trade, core enterprises have strong strength, so they generally form accounts payable to upstream enterprises. Upstream enterprises can use the real collection right of accounts receivable to provide mortgage guarantee and apply for financing to financial institutions. Core enterprises have good economic strength and high rating, and have strong cashing ability of accounts receivable, so they are highly accepted by the market and financial institutions. Therefore, accounts receivable financing has become the most commonly used financing means.

#### **(2) Inventory financing**

Inventory financing refers to the mode of applying for credit to financial institutions with inventory goods as collateral. Inventory financing products are generally used in enterprises that need to maintain a large amount of inventory

for a long time or have slow inventory turnover. The enterprise promises that in case of risk, the financial institution can sell the inventory goods for cash, so as to repay the credit principal and interest of the financial institution. Inventory financing can revitalize the inventory that is difficult to realize or slow to realize, and obtain the cash flow required for operation and production in time. However, in the actual business operation, it is difficult for financial institutions to carry out daily supervision on inventory goods, and the actual value of inventory is difficult to estimate due to price fluctuations. Therefore, financial institutions rarely use this product.

### (3) Advance payment financing

Prepayment financing refers to the trade activities between small and medium-sized enterprises and core enterprises. Usually, the core enterprises will require small and medium-sized enterprises to adopt the trade mode of payment before goods. Because the core enterprises will distribute goods only after confirming the receipt of payment for goods, it takes a certain time to transport goods, resulting in the financing demand of enterprises during the transportation time. Small and medium-sized enterprises take the warehouse receipt and inventory of the third-party managed warehouse as the collateral subject matter, and put forward financing needs to financial institutions to meet their daily business operations. Financial institutions of prepayment financing business need to be responsible for monitoring the purchase of goods. At the same time, they should check the inventory of goods with logistics and storage institutions for many times, which puts forward requirements for the regulatory means and timeliness of financial institutions. Therefore, this kind of financing method is also less used.

## **Tobacco Financial Risk**

Tobacco financial risk means that the financing enterprises may fail to repay the credit on time due to the failure of strategic layout or blind foreign investment, which may cause corresponding economic losses to the banks. While accelerating the development of enterprises, tobacco finance has conductivity and amplification to credit risk. As a hub in the supply chain, core enterprises connect hundreds of small and medium-sized enterprises. Once one or several enterprises have a risk, they will transmit the risk to other enterprises through the supply chain. Tobacco financial risk is generally caused by external macro factors and internal factors. The external reason is that most of the participants in the economic activities in the supply chain other than the core enterprises are small and medium-sized enterprises, which have a small volume and lack of core competitiveness. In addition, the competition among enterprises is large and the anti risk ability is poor. The internal reasons are generally the problems in the management and operation of small and medium-sized enterprises, the lack of long-term development and operation planning, and a small business decision-making error will lead to the emergence of enterprise risks. The factors affecting tobacco financial risk are as follows:

### (1) External factors

① The impact of macro environment. At present, there are supply chains in various industries, and the enterprises in the supply chain are more and more closely linked. If the macro market environment fluctuates violently, some small and medium-sized enterprises and even core enterprises have risks, which will spread the risks to the whole supply chain. Especially in recent years, the adjustment of national macroeconomic policies has affected the core enterprises in some industries, resulting in the impact

on the whole enterprises in the supply chain.

② Policy supervision. In recent years, with the continuous innovation of financial instruments, more and more financial products have been applied to economic activities, and many non-financial enterprises also carry out tobacco financial business within the allowable scope of the current policy. However, with the gradual improvement of China's legal system and the continuous adjustment and improvement of policies by regulatory authorities, many tobacco financial products will be included in the scope of supervision or even cancelled. Once the regulatory policy changes, it will bring certain credit risk to the small and medium-sized enterprises with financing in the supply chain.

③ Financial market environment. The development of tobacco financial business has found a risk controllable capital investment channel for financial institutions, and brought profit growth to financial institutions through business expansion. However, once the financial market changes, the capital cost of financial institutions will rise, which will inevitably lead to the rise of the financing cost of small and medium-sized enterprises, making some small and medium-sized enterprises unable to bear the high capital cost, resulting in the rupture of the capital chain.

(2) Internal factors

① Operational risk

Manage risk. Supply chain enterprises are closely linked through core enterprises as hubs, forming a closed loop on the capital chain. The efficient flow of funds in the whole closed loop improves the operation efficiency of the whole supply chain and effectively integrates the scattered funds of various enterprises. However, if there is a problem in one link of the supply chain due to poor management, it may lead to the rupture of

the capital chain in the whole closed loop, resulting in chain reaction, overall risk and serious consequences.

Operational risk. In the supply chain, the upstream raw material suppliers, logistics enterprises, core enterprises and downstream sellers have a clear division of labor and work together to make the whole supply chain operate normally. If an enterprise has an operation risk, which leads to the slowdown of business or the rupture of capital, it may lead to the risk of capital rupture of the whole supply chain.

credit risks. Small and medium-sized enterprises with financing needs in the supply chain usually have weak credit rating and financing ability. Through close business transactions with core enterprises and with the strong business guarantee ability of core enterprises, they can get financing from financial institutions. However, a large number of enterprises with weak strength also increase the risk of tobacco finance.

Trade authenticity risk. The development of tobacco financial business is based on the real trade background between upstream and downstream enterprises and core enterprises. Once an enterprise obtains financing from financial institutions through false trade background, it will lead to credit risk in financial institutions.

② Financial risk

Financing risk. Small and medium-sized enterprises have weak strength and are relatively weak in trading business, which leads to poor profitability of some enterprises. However, with the increase of their own financing needs, they need to pay a lot of financing costs to financial institutions, which leads to the reduction of enterprise profits and the decline of enterprise viability.

Liquidity risk. The upstream and downstream enterprises of the supply chain carry out trade activities around the core enterprises, and use the accounts

receivable or prepayment of the core enterprises as the collateral object for income. Therefore, financial institutions obtain the ownership of accounts receivable and prepayment of the enterprise. However, if the core enterprises have problems, resulting in failure to cash accounts receivable or timely delivery, and small and medium-sized enterprises are unable to repay the principal and interest of financial institutions in time, it will eventually lead to liquidity risk in financial institutions.

## RESULTS

### Financial Design Concept of Tobacco Industry

As a core enterprise in the supply chain, tobacco companies are mainly responsible for the procurement, centralized management, transportation and sales of front-end tobacco leaves, as well as the unified acquisition, storage, deployment, transportation and terminal sales of back-end finished tobacco, and supervise the supply chain. Tobacco growers and cigarette retailers, as important participants in the industry, carry out business activities around tobacco companies. Tobacco growers and cigarette retailers are at the front end and back end of the supply chain of the tobacco industry respectively. Different business activities lead to certain differences in financing needs between the two sides. Financial grow of tobacco industry is shown in Figure 1. According to the characteristics of tobacco business activities, the supply chain financial products of tobacco industry should be designed around the following points:

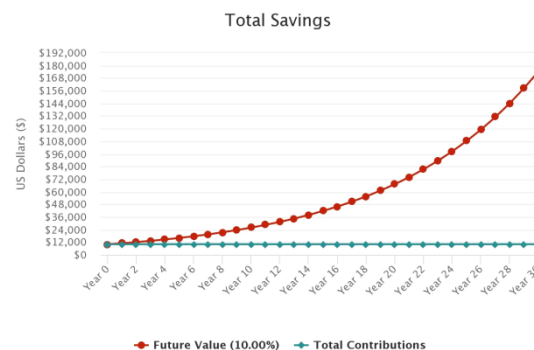


Figure 1 Financial grow of tobacco industry

(1) The supply chain organization of the tobacco industry is relatively fixed. In the supply chain of the tobacco industry, tobacco companies firmly grasp the acquisition right of upstream raw materials and the monopoly right of downstream commodity sales. At the same time, upstream and downstream procurement and sales shall be reviewed and filed by tobacco companies. Therefore, core enterprises have the initiative and core data of the whole industry, and have detailed transaction data support for the capital needs of all links over the years. In the process of developing supply chain finance products, the pre loan investigation of fund demand side is more transparent and easy to distinguish between authenticity and authenticity, which is convenient for the rapid development of supply chain financial products, and improves the efficiency of approval and approval rate of financial business. After fully connecting with core enterprises and obtaining data, the bank can quickly judge whether potential customers can meet the credit conditions. Therefore, the bank has established a white list customer system in the tobacco industry. Customers who join the white list can omit the process of early credit investigation after submitting credit application, and quickly enter the lending process after verifying the authenticity of capital demand, which greatly improves the efficiency of credit processing.

(2) The financing needs of tobacco growers and cigarette retailers are different. Tobacco growers in the upper reaches are scattered in various villages in the province, with a large number and strong seasonality. In the planting season, it is necessary to purchase agricultural means of production such as pesticides and chemical fertilizers dedicated to tobacco from tobacco companies at different times. The purpose of funds is clear and the object of payment is clear. The capital demand of a single household is small, usually between 20000 and 50000. Downstream cigarette retailers are distributed all over the province and will focus on purchasing cigarette products at the end of the year or on the eve of the festival. Because cigarette retailers need to apply for cigarette monopoly certificates from tobacco companies and order through the cigarette distribution system of tobacco companies, and tobacco companies set up cigarette sales certificate rating system for cigarette retailers, they need to make a large number of product reservations to book high-end products they need at the end of the year or on the eve of the festival, resulting in a large demand for funds. There is usually a financing demand of 100000-500000 yuan. According to the time node of capital demand and the amount of capital demand, banks divide supply chain financial products into tobacco growers' financial products and cigarette retailers' financial products.

(3) The supply chain circulation of tobacco industry requires funds to be in place in time. Tobacco seeds, fertilizers and other production factors used in the process of tobacco planting need to be purchased from tobacco stations set up by tobacco companies. Therefore, tobacco growers have an urgent demand for funds. Similarly, when placing an order in the cigarette distribution system, cigarette retailers need to pay funds to the tobacco company first, and then the tobacco company carries out cigarette

distribution. Funds need to be in place in time. In order to meet the needs of customers, for customers listed in the white list, after verifying the authenticity of business background and meeting the premise of compliance, credit funds are issued quickly.

(4) Tobacco growers will receive various subsidies from tobacco companies in succession during the planting process, so growers can choose to repay the bank credit principal at any time. Similarly, cigarette retailers can successively receive payment during the sales process, and cigarette retailers can also choose to repay the bank credit principal at any time. Therefore, when designing the product, the bank has adopted the credit method of checking the total credit line at one time, allowing customers to borrow as they use, and the business line does not exceed the total credit line, so as to facilitate customers' use of funds and reduce financing costs.

### **Economic Benefits of Tobacco Industry**

The industrial economic benefits created by the tobacco industry include the output value of tobacco leaves, the output value of cigarette industry, the output value of tobacco related products and the output value of cigarette sales. In recent years, with the expansion of tobacco planting area, the yield of tobacco is also increasing. Table 1 lists the tobacco output in recent 6 years. The tobacco output is about 27000 tons, and the overall trend is increasing. The output of cigarettes is increasing year by year, and the total industrial output value of tobacco is growing rapidly. Among them, the added value of tobacco products will reach the highest value of 17.71 billion yuan in 2020. The output value of sales links is also increasing year by year.

According to statistics, in 2020, there will be 271264 cigarette retailers in province alone. According to the

statistical yearbook, from 2015 to 2020, there were 9494, 9554, 11092, 7469, 6979 and 7336 workers in the tobacco products industry of province a, accounting for 0.026%, 0.026%, 0.029%, 0.021%, 0.020% and 0.018% of the total employment of province a respectively. This is because the number of workers in tobacco products only includes the employees of tobacco enterprises, excluding the number of tobacco farmers planting tobacco and the number of employees in tobacco businesses. Therefore, the calculated employment absorbed by a tobacco accounts for a small proportion of the total employed population. But in fact, this small

proportion is indeed the economic contribution of the tobacco industry to the society. Table 2 shows the employment contribution of the tobacco processing industry. Because the revenue ratio of all employees in the tobacco industry and commerce is roughly 1:1, the employment contribution of the tobacco industry is more than twice that of all employees in the tobacco processing industry. Table 3 shows the comprehensive evaluation of social costs and benefits of tobacco. According to the calculation, the average social cost of tobacco to province a in the five years from 2016 to 2020 reached 3.701 billion yuan.

**Table 1**  
**Tobacco Production and Industrial Added Value of Cigarettes**

Year	Tobacco leaf output (10000 tons)	Cigarette output (100 million pieces)	Total industrial output value (100 million yuan)	Industrial added value (100 million yuan)	Output value of sales supervision (100 million yuan)
2015	2.60	1031	118.6	82.6	117.2
2016	2.50	1066	131.1	88.0	131.1
2017	2.57	1128	158.5	114.2	157.8
2018	2.54	1162	171.3	131.8	170.5
2019	2.94	1190	198.5	147.3	197.2
2020	2.74	1510	226.3	177.1	225.4

**Table 2**  
**Employment Contribution of Tobacco Processing Industry**

Year	2015	2016	2017	2018	2019	2020
Number of employees in tobacco industry (person)	9494	9554	11092	7469	6979	7336
Total employment (10000 persons)	3670	3741	3818	3916	3988	4050
Total wages of employees in the tobacco industry (10000 yuan)	31722,2	37762	31230	40323	43225	82797

**Table 3**  
**Comprehensive Evaluation of Social Costs and Benefits of Tobacco (100 Million Yuan)**

Year	Social cost of tobacco		Economic benefits of tobacco
2016	Direct medical expenses	2.13	37.999
	indirect losses	2448	
	Deadweight Loss	0.427	
	total	27.037	
	Net social contribution		10.96



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2027	Direct medical expenses	3.57	51100
	indirect losses	2695	
	Deadweight Loss	0.073	
	total	30.593	
	Net social contribution	20.507	
2028	Direct medical expenses	5.67	61464
	indirect losses	3127	
	Deadweight Loss	0.197	
	total	37.137	
	Net social contribution	24.327	
2019	Direct medical expenses	9.05	66 61
	indirect losses	33.0?	
	Deadweight Loss	0194	
	total	42.314	
	Net social contribution	24.297	
2020	Direct medical expenses	1006	76.130
	indirect losses	37.8	
	Deadweight Loss	0.113	
	total	47.97	
		Net social contribution	2816

## DISCUSSION

The revenue advantages of the bank's supply chain financial products are mainly reflected in the following aspects:

(1) For upstream and downstream tobacco growers and cigarette retailers, real transactions around core enterprises can obtain credit loans, which solves the problem of difficult and expensive financing, and the financing cost is relatively low, which promotes the economic activity of grass-roots participants in the supply chain.

(2) For banks, through the operation of products, they have expanded their credit business and improved their profitability. The funds of the whole supply chain are settled in the bank, which brings an objective amount of precipitated funds to the bank, so as to expand all kinds of asset business of the bank. At the same time, when handling asset settlement business, it can also bring great improvement to the intermediate business income of the bank.

(3) Supply chain finance of tobacco industry can promote the overall

development of the industry. The bank has absorbed a large amount of deposits from tobacco companies and invested these deposits in the upstream and downstream participants of the supply chain, which improves the economic vitality of the upstream and downstream participants, makes full use of a large amount of deposits from tobacco companies to invest credit funds, and also increases the bank's on balance sheet and off balance sheet income. As the bank is absolutely controlled by tobacco companies and is an integral part of the tobacco industry, the business development of the bank has improved the overall economic vitality of the whole tobacco industry.

The benefits of financial products affecting the bank's supply chain are mainly reflected in the following aspects:

(1) In order to promote supply chain financial products, banks need to invest a lot of human and material resources in the design and construction of product systems, as well as a large number of front-line personnel to promote and

handle products, resulting in an increase in initial business costs. Due to the strong timeliness of supply chain financial products, it is necessary to monitor the market and supply chain financial participants at any time, and timely adjust the bank's credit scheme and rules and regulations. At present, the operating cost during the promotion period is higher than that of traditional credit business.

(2) At present, the interest rate pricing of the bank's supply chain financial products is not detailed enough, and the product interest rate pricing is not adjusted according to the capital cost of the business promotion area. Therefore, some regional branches fail to achieve the expected profit after promoting the supply chain financial products. To sum up, although the supply chain financial products of the tobacco industry have brought the problems of rising costs and substandard profits in some regions, they have expanded the bank's asset business and brought considerable benefits. Banks should actively promote the supply chain financial products of the tobacco industry.

The difficulty of agricultural project financing is always a problem worthy of discussion and of great practical significance. The fund problem encountered in the process of modern tobacco agriculture has a very typical representative significance. This is not only for financing, but to integrate resources from all parties, and make use of the advantages of development finance in the coordination between the government and the market to integrate individual farmers into villages, townships and cooperatives. Apply modern enterprise management technology and develop agriculture with industrial thinking. Priority should be given to the development of infrastructure and the improvement of modern planting and management. At the same time, we should reduce costs, increase profit space and improve efficiency. This is not only a management method, but also a trend.

China's modern tobacco agriculture is in a period of development. At present, the production methods and basic geographical conditions adopted in various planting areas are also very common throughout the country. However, affected by the cultural environment, farmers' quality and other factors, many places still need to be developed and improved. When learning foreign advanced experience and management mode, we can't achieve it overnight and be eager for success. We should steadily take advantage of the organization and coordination advantages of the government and make use of development financial funds to overcome difficulties. Only by improving the design and enlarging the leverage of financial support policies can the tobacco industry further develop.

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